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The Power of Public Choice in Law and Economics

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The Power of Public Choice in Law and Economics

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Abstract: In this paper I discuss how Law and Economics can benefit from incorporating some insights from Public Choice into their analyses. Within this argument, I examine the evolution of experimental methods by looking at laboratory, field, and natural experiments; and conducting a very simple scientometrics analysis on the relative frequency of experimental studies in journals such as *Public Choice*, *Journal of Law and Economics*, and *Journal of Law, Economics and Organization* in comparison to top economics journals such as *American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, Econometrica,* or *Review of Economic Studies*. I also refer to the connectivity of Behavioral Law and Economics and Behavioral Public Choice. The paper then finishes with a discussion of a selected number of topics covering areas such as corruption, tax compliance, shitstorms/firestorms, constitutional choices, globalization and international organizations; all of which present scientific challenges when applying pure Law and Economics approaches without also implementing a Public Choice analysis.

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If lawyers, and law schools, seek to introduce more economic theory into their training in order to become more informed potential legislators and advisors to legislators, my support remains unqualified and enthusiastic. If, however, they seek to become and to train potential jurists who are instructed to have no qualms about legislating for us all, the pragmatic improvements that result might forestall rather than hasten the changes in jurisprudential attitudes that are essential for a return to operative constitutional democracy.

James M. Buchanan (1974, p. 491).

In brief, the implementation of the law must be self-enforcing with all human beings – citizens and agents of the state – being treated alike and as rational. This is, of course, the assumption behind much of mainstream microeconomics. But interestingly, traditional law and economics has assumed this strictly for all ordinary citizens and flagrantly violated this assumption for agents of the state.

Kaushik Basu (2018, p. 57)

The production, exchange, and consumption of goods and services views as an economic order occurs in the context of an epistemic order concerned with the generation, transmission, and use of knowledge, and a political order concerned with the formulation, use, monitoring, adjudication, and enforcement of mutual expectations about rule-ordered relationships.

Vincent Ostrom (1993, p. 167)

Arthur, you're doing the right thing. I've always said that experiments are very suited to study economic phenomena. I was saying so even before Vernon Smith became famous.

Gordon Tullock to Arthur Schram in one of the meetings of the European Public Choice Society (Schram 2016, p. 215).

1 Introduction

Incorporating insights of Public Choice into Law and Economics is a natural avenue, as both study non-market decision-making and interactions between the legal environment and the public sector (Durden and Marlin 1990). The seminal book on Law and Economics was not authored by Chicago-based Richard A. Posner, the key influential figure in the field of Law and Economics, but rather by one of the founding fathers of Public Choice; namely, Gordon Tullock, whose formal education was in law. His contribution *The Logic of the Law* was

published in 1971, appearing two years before Posner's *Economic Analysis of Law*[1] (Rowley 2005). As Tullock (1971) stressed in the preface of his book, the innovative nature or focus of his contribution was to apply the methods of modern welfare economics or tools of social sciences in general to law and legal institutions. Buchanan (1974) was concerned that good economics based on a bad or misguided conception of legal process would not achieve the structural and procedural changes needed. Using the assumption that Posner's book *Economic Analysis of Law* affects first-year law school students – who will later be in positions of decision-making power such as judges, legislators, administrators, legal scholars or educators – as a mental experiment, it failed Buchanan's test on the grounds that "The jurisprudential setting or framework within which his whole economic analysis of law is placed does not seem to have been critically examined" (p. 484). In his wonderful piece *Economics and Its Scientific Neighbor*, Buchanan (1966) also examines in some detail the relations of economics with its neighbors, including political science and law, focusing on an array of spillouts and spillins. For example, he emphasizes the importance of greater connectivity between the structure of economic theory and the legal-institutional framework, acknowledging the work on the economics of property by Ronald Coase and Armen Alchian. In reference to Landes and Posner's (1975) article, Buchanan (1975) admits that he likes the paper as Public Choice "has long needed an analysis of the judicial branch of governmental structure, and the Landes-Posner paper represents a good start in that direction" (p. 903).

Law and Economics brought, for example, a new understanding of the structure of the common law, and Public Choice influenced Law and Economics in offering a better understanding of statute law and the theory and practice of government regulation (Newman 1998). However, it is often still the case that published papers and excellent textbooks in Law and Economics such as Cooter and Ulen's (2014) *Law & Economics* do not build a strong link between Public Choice and Law and Economics. For example, the term *Public Choice* appears only once in Cooter and Ulen's (2014) textbook. In addition, the Chicago School Law and Economics stream relied heavily on the idea that the common law is *efficient*, thereby ignoring the fact that the common law is not a private market and is heavily affected by impulses so strongly emphasized by the Public Choice literature (Rowley 1989)[2]. Tullock (1971) had

[1] According to Sunstein (2016), Posner dislikes the term "law and economics" preferring economic analysis of law. The Chicago School stresses that economics helps to specify the effects of the law in the real world.

[2] Buchanan (1974) also criticized that Posner's book failed to refer to Bruno Leoni's work that argued for the superiority of law over legislation. However, according to Buchanan, Leoni's law is an activity not guided by the criteria of social improvement but rather as a stabilizing institution. This institution provides the required

already pointed out that the law is far from efficient or optimal. In his chapter on Criminal Law, Friedman (2001) also criticizes the conventional analysis of optimal punishment as problematic, because it "treats criminals as rational, self-interested actors. But it treats the enforcement apparatus of police, courts, prosecutors, and legislature as a philosopher-king, with imperfect knowledge but only the best of motives" (p. 239). Dennis Mueller (2003) stresses that "[t]his Jekyll-and-Hyde view of man's nature has a long and distinguished ancestry" (p. 322). Indeed, Aristotle heavily criticized Plato's statement that evils would never cease for men until either philosophers became kings or kings became philosophers. He saw this as utterly reckless, possibly due to the fact that Aristotle was more driven by a realistic outlook on political life and therefore pursued political knowledge in the realm of historical facts and practical experience (Chroust 1968). As Tocqueville (1835) observes in *Democracy in America*:

> A politician, in the United States, seeks first to discern his interest and to see what analogous interests could be grouped around his; then he busies himself finding out if, by chance, a doctrine or principle exists in the world that could be placed conveniently at the head of the new association, to give it the right to come into being and to circulate freely (p. 285).

As Friedman (2001) also argues, by "By treating state actors differently, we not only obscure the similarities, we also make it harder to think clearly about the choice between privately and publicly enforced law" (p. 239). The Public Choice literature, on the other hand, emphasizes that politicians maximize their individual utility based on factors such as votes, expected wealth, or ideology rather than just benevolent public interest; and that in the absence of institutional constraints, political markets respond to rent-seeking activities by interest groups (Rowley 1989). Consequently, Public Choice scholars tend to focus less on what Law and Economics do – namely, end-state outcome efficiency – and more on *process-oriented* efficiency (Rowley 1989). The Jekyll-and-Hyde view has also been discussed in relation to judges who play a central role in the drama of common law and the statutory and constitutional law (Posner 1993). The romantic view that sees "members of the judiciary as unique guardians of some mystical 'public interest'" (Buchanan 1975, p. 903) is still quite dominant among legal scholars. Public Choice suggests that judges defined broadly including jurors, lay assessors, arbitrators, boards of judges and individual judges (amateurs and professionals) are not *solely* driven by finding the truth and serving the public interest (Tullock 1971). For example, boards

framework within which individuals can plan their own affairs with minimal external interferences, which expresses a basic distrust of politicians and ordinary political processes.

of judges in European courts may act in a manner their superiors think is efficient due to promotion reasons (Tullock 1971)[3]. In his exploration of a civil-law judiciary, Schneider (2005) analyzes the German labor court system to test empirically whether judicial career incentives and opportunities affect court performance due to its hierarchy of judges. His study provides support for the notion that career incentives influence judges' behavior. Posner (1993) also acknowledges issues around appointments: "Politics, personal friendships, ideology, and pure serendipity play too large a role in the appointment of federal judges to warrant treating the judiciary as a collection of genius-saints miraculously immune to the tug of self-interest" (pp. 3-4), although he strongly emphasizes the power of judicial impersonality (e.g., Posner 1973)[4]. Similarly, Cooter (1983) also argues that prestige seeking among public judges is a reasonable hypothesis with the most immediate audience consisting of lawyers and litigants who bring cases before them. Overall, Basu (2018) criticizes that "no matter what your ideology, what your normative stance on crime and punishment, you cannot hold on to the neoclassical model of law and economics. It is internally flawed" (p. 24). He stresses that:

> [t]he mistake in the neoclassical approach to law and economics arises because of the unwitting assumption that leaves the enforcers of the law out of the picture or treats them as robots who will automatically do what the law asks them to do" (pp. 34-35).

He even emphasizes that the "the standard view of law has, unfortunately, become so much a part of our thinking and has corrupted our ability to see clearly" (pp. 49-50).

Some scholars, such as Rowley (1989), have argued that within the Public Choice tradition, the Virginian political economy offers much richer institutional insights in the political market than the Chicago approach that emphasizes the power of competing pressure groups to effectively control the outcome of political markets or the legal process (Rowley 1989). Public Choice has received a lot of vigorous disagreement from the participatory theories literature. Those scholars maintain that law is likely to reflect the public interest (Eskridge and Ferejohn 2001). Therefore, that stream of thought views rent-seeking as a pathology, only visible when the process of participation and deliberation becomes corrupt due

[3] In the US, for example, income and promotions of public court judges are unrelated to their performance measures. This is not the case for private judges, who have to attract business (Cooter 1983). Federal judges, e.g., have a virtually certain life tenure and the salary is independent of their choices and decisions (Cooter 1983).

[4] "The invisible hand of the market has its counterpart in the aloof disinterest of the judge. The method by which judges are compensated and the rules of judicial ethics are designed to assure that the judge will have no financial or other interest in the outcome of a case before him, no responsibility with respect to the case other than to decide issues tendered by the parties, and no knowledge of the facts in the case other than what the competition of the parties conveys to him" (p. 493, edition 1986).

to excluding groups of citizens through a process of secrecy, or when decisionmakers make up their mind before receiving ideas and input from the public and experts (Eskridge and Ferejohn 2001, p. 619).

Thus, there are some natural and fundamental tensions evident in the historical disagreements between legal and Public Choice scholars[5] that hinder research attempting to achieve consilience between the field of Public Choice and Law and Economics. Parisi (2004), for example, notes that:

> Public choice may indeed inject a skeptical – and at times disruptive – perspective into the more elegant and simple framework of neoclassical economics, but this added element may well be necessary to better understand a complex reality. In a way, the systematic incorporation of public choice theory into the economic approach to law has contributed to bridging the conflicting normative perspectives in law and economics, at least by bringing the debate onto the more solid ground of collective choice theory" (p. 263).

Finding or emphasizing more ways to advance the common ground with Public Choice may open up new innovative avenues in Law and Economics. For example, in his book *Consilience: The Unity of Knowledge*, Edward O. Wilson (1998) highlights that "[u]nits and processes of a discipline that conform with solidly verified knowledge in other disciplines have proven consistently superior in theory and practice to units and processes that do not conform" (p. 216). Public Choice can help to craft better laws in terms of procedural efficiency and outcomes. When applying a Public Choice analysis in Law and Economics, it is natural to focus on the importance of the institutional framework; offering many avenues for identification and close examination of the "action arena", the patterns of interaction and outcomes, and the evaluation of these outcomes (Ostrom 1999). Public Choice has a considerable advantage when seeking to understand the incentive structure embodied in various institutional forms (Brennan and Buchanan 1988). In Elinor Ostrom's 1997 Presidential Address of the American Political Science Association (Ostrom 1998), she also emphasizes that:

[5] Legal scholars have often classified the Public Choice approach as too cynical (Eskridge and Ferejohn 2001). Steven Kelman, Harvard Professor of Public Management, strongly criticized Public Choice in his article "Public Choice" and Public Spirit. Kelman (1987, pp. 93-94): "Cynical descriptive conclusions about behavior in government threaten to undermine the norm prescribing public spirit. The cynicism of journalists - and even the writings of professors - can decrease public spirit simply by describing what they claim to be its absence. Cynics are therefore in the business of making prophecies that threaten to become self-fulfilling. If the norm of public spirit dies, our society would look bleaker and our lives as individuals would be more impoverished. That is the tragedy of 'public choice.'".

> Any serious institutional analysis should include an effort to understand how institutions – including ways of organizing legislative procedures, formulas used to calculate electoral weights and minimal winning coalitions, and international agreements on global environmental problems – are vulnerable to manipulation by calculating, amoral participants. In addition to the individuals who have learned norms of reciprocity in any population, others exist who may try to subvert the process so as to obtain very substantial returns for themselves while ignoring the interests of others. One should always know the consequences of letting such individuals operate in any particular institutional setting (p. 16).

The connectivity between Public Choice and Law and Economics can be improved by applying methodological tools such as laboratory, field, and natural experiments where Public Choice has historically had a strong influence on Law and Economics (particularly in lab experiments). Looking at trends in the areas of Behavioral Public Choice or Behavioral Law and Economics also improves this connectivity; such areas are not only relevant from a theoretical perspective but also in their application of experimental approaches. In addition, it is worth discussing areas of research that would benefit from an application of a Public Choice analysis in Law and Economics. I will therefore mention just a couple of examples at the end of this contribution.

2. Experimental Research in Public Choice and Law and Economics

The "new" Law and Economics focuses on the entire legal system as well as the doctrines and procedures of criminal, civil, or public laws rather than around the operation of the economy and markets (e.g., areas of antitrust, regulation, labor, or taxation) that was the focus of the "old" Law and Economics; relying heavily not only on neoclassical economics but also using advanced statistical and econometric methods (Rowley 1989). For example, experimental work is a very powerful tool for making real progress in descriptive decision theories (Selten 2004). Gordon Tullock had a strong influence in the field of Experimental Public Choice – as nicely reviewed in Houser and Stratmann (2012) – and via the use of direct quotes, Schram (2016) reminds us how many important and relevant experimental insights there are in Tullock's *The Organization of Inquiry,* published in 1966. As the key driving force behind the application of Public Choice in the lab setting since its beginnings in the 1970s[6], Charles Plott (2014)

[6] In his biography, Smith (2018) notes: "Charles Plott and I talked experiment (e.g., the idea of induced valuation) on many bass fishing trips to Lake Powell and to Indiana Lakes in the 1960s. This series of conversations sparked

contributes an interesting article on Public Choice and the development of modern laboratory experimental methods in economics and political science. According to Plott, Public Choice led to a major transition in the use of lab experiments; changing the focus from private sector phenomena such as markets, oligopoly, or matrix games to the public sector to test new set of theories and focus on institutional details, new environments, and new approaches to policy. Schram (2004) recalls that the European Public Choice Society explicitly stated its interest in experimental studies. According to him, two types of experimental studies are important for Public Choice: the ones concerned with individual behavior and motivations, and the ones that use experiments to analyze a number of traditional Public Choice topics such as public goods, voter turnout and participation, rent-seeking and lobbying, or spatial voting.

Charles Plott (2014) acknowledges that the work by Buchanan and Tullock had an enormous influence on the development of lab experimental methods with a focus on rules of the process. The development of experiments was driven by the curiosity about the power of institutions in shaping collective choice. Plott also had a strong impact on the political science experimental literature; for example, by establishing an experimental laboratory for political science and economics at Caltech (Morton and Williams 2010)[7]. In general, the 1970s saw a sizable growth in laboratory experimental work across several political science departments. In the 1950s and 1960s, game theory had a strong influence in the understanding of international relations[8] that inspired later lab research in that area, but experimentation only became mainstream in the late 1990s (see Morton and Williams 2010 for a discussion on increase in experimentation in political science)[9]. Similar to Samuelson and Nordhaus' (1985) textbook *Economics* statement – that later disappeared once experimental economics became more mainstream[10] – political scientists held a long-expressed skepticism regarding the prospects for an experimental approach. Such skepticism was already reflected in the APSA presidential address by the famous scholar A. Lawrence Lowell in 1909: "We are limited by

both of our continuing interests in experiment and was the link to public choice and the whole field of experimental political economy. Charlie created that field, alongside his ingenious colleagues, Mo Fiorina, Mike Levine, Roger Noll, and others. Strangely, I knew nothing of this development until the work was well advanced, and ready to be reported in papers and publications" (p. 31).

[8] See, e.g., studies published in the *Journal of Conflict Resolution* (Morton and Williams 2010).

[9] See also Druckman et al. (2006) article in *American Political Science Review* on *The Growth and Development of Experimental Research in Political Science*. Morton and Williams (2010) also refer to the journal *The Experimental Study of Politics*, which was active in the 1970s but was out of existence by 1981.

[10] "One possible way of finding out economic laws… is by controlled experiments… Economists [unfortunately] … cannot perform the controlled experiments of chemists or biologists because they cannot easily control other important factors. Like the astronomers or meteorologists, they generally must be content largely to observe" (p. 8).

the impossibility of experiment. Politics is an observational, not an experimental science" (cited in Druckman et al. 2006, p. 627). However, scholars using observational survey data had major issues in understanding and testing the causes of various aspects such as the decline in turnover in US presidential elections in the 1960s (Gerber and Green 2000).

In his article *Law and the Invisible Hand*, Buchanan (1977) states:

> Man must look at all institutions as potentially improvable. Man must adopt the attitude that he can control his fate; he must accept the necessity of choosing. He must look on himself as a man, not another animal, and upon "civilization: as if it is of his own making" (p. 136).

Institution was at the core of an experimental focus in Public Choice. Vernon Smith, in his 1974 article *Economic Theory and Its Discontents,* also appealed for a new micro-theory that:

> will, and should, deal with the economic foundations of organization and institution, and this will require us to have an economics of information and a more sophisticated treatment of the technology of transacting (p. 321).

In *Why Experiment in Economics*, Binmore (1999) stresses that:

> [i]t seems to me uncontroversial that laboratory experimentations for policy purposes – as in Plott's recent testing of the rules of the big American spectrum auction for the Federal Communications Commission – is not only firmly established as a tool for widening debate, but that it is an activity that can only sensibly be undertaken by economists who understand the institutions that are to be reformed (p. F16).

Hersch and Houser (2018) point to the decision making under majority rule as one of the most interesting insights in the *Calculus of Consent*, influencing experimental Public Choice focused experiments and directing Plott's experimental work. The Experimental Public Choice agenda suggested that studying the ways in which individualism – within a given set of institutions and the physical environment – limits feasible options can help us understand the public sector. According to Plott (2014), Public Choice theory is "behavioral in the sense that public decisions are assumed to reflect equilibrating tendencies resulting from the interactions among individuals and institutions. The theoretical and empirical challenges are to identify and understand the principles at work" (pp. 333-334), also taking into account equilibrium solution concepts from game theory, economics, and public choice. He therefore emphasizes the following fundamental equation (p. 334):

$$\text{preferences} \times \text{institutions} \times \text{feasible set} \times \text{solution/equilibrium} \rightarrow \text{outcomes}$$

Lab experiments are well suited to this exploration, as key parameters can be held constant while institutions are changed to understand their impact, solutions, and equilibrium. Research in this area was conducted by both economists and political scientists, who contributed to the move towards positive political theory. According to Plott, "[b]y the beginning of the 1980s, the interrelated disciplines of economics, political science, and public choice had a solid laboratory experimental foundation" (p. 351).

As more experiments are generated, more evidence can be provided that directly matters to legislators, administrators, and judges. In general, Experimental Law and Economics came about later than Experimental Public Choice literature. Scholars in close proximity to Vernon Smith and colleagues – among them Elizabeth Hoffman (in cooperation with Matthew Spitzer) – worked towards promoting the Experimental Law and Economics research agenda. As with Public Choice, the strong policy orientation of Law and Economics made an experimental approach particularly useful (Hoffman and Spitzer 1985), and the first step required understanding how the available experimental insights were important from a Law and Economics perspective. However, that research was not done by legal scholars, nor was it designed to *directly* test theories in Law and Economics; for example, conclusions about market mechanisms can have important implications for antitrust law (Hoffman and Spitzer 1985). A natural first step was to conduct experiments related to the Coase Theorem (McAdams 2000), a cornerstone of the laissez-faire approach in Law and Economics (Hoffman and Spitzer 1985). Questions about the circumstances under which bargaining around legal entitlements produces efficient outcomes or affects wealth distribution were at the core of the field's interest (McAdams 2000). Law and Economics scholars were also interested in experimentally exploring pre-trial bargaining and settlement (McAdams 2000). Early experimental attempts tried to connect with the Public Choice audience; for example, Coursey and Stanley's (1988) article *Pretrial Bargaining Behavior within the Shadow of the Law: Theory and Experimental Evidence* was presented at the Public Choice Meeting before publication in *International Review of Law and Economics*. During development of an experimental approach in Experimental Law and Economics, experiments were used to help design new institutions. The goal was to test new institutions before replacing the old (Hoffman and Spitzer 1985), indicating a close overlap with the Experimental Public Choice literature. Experimental Law and Economics scholars were interested in understanding incentive-compatible mechanisms in the allocation of, for example, public goods or the development of regulation schemes (Hoffman and Spitzer 1985).

Field experiments have rapidly become a very important data source in the last two decades. They provide a valuable policy tool to assess the effectiveness of policy options before deciding whether to apply such policy strategies broadly, taking advantage of randomization and realism[11]. Thus, field experiments contribute to reasonable decision making. Active collaborations with government agencies in conduct of field experiments gained momentum through the emergence of behavioral insights teams within government agencies, such as the UK Behavioural Insights Team. In recent years, members of such teams have started to publish academic articles and books (e.g., Hallsworth 2014; Hallsworth et al. 2017, Halpern 2015). Such a trend is very helpful, as the policy arena is often subject to impatience and pressing concerns (Manski 2013). Time pressure carries the risk that a simple or incomplete analysis is conducted, often drawn on strong conclusions (Manski 2013). Such reports can be subject to wishful extrapolation and expectations of those who request or pay for the reports. A more scientific approach using randomized control trials therefore helps provide better informed policy advice and more effective practices. Mechanism experiments can also incorporate prior theoretical and empirical knowledge to maximize information in the place where the policymaker is required to know the most. Ludwig, Kling and Mullainathan (2011) advise ruling out candidate policies, expanding the set of policy options, prioritizing funding, and concentrating resources. For example, if you explore the broken window theory, it would be expensive to identify a representative sample of cities and randomly select half of their high crime to be subject to broken window policing (Ludwig, Kling and Mullainathan 2011). An alternative experiment would be to explore minor offences in a natural environment, as carried out by Keizer et al. (2008) in a *Science* article looking at whether signs of disorderly behavior trigger minor norm violations in common public spaces.

In general, field experiments require an understanding of the contextual aspects in the setting under exploration, as it is not easy to extrapolate the insights derived from one country to another (Duflo 2006). As such, there are many challenges with conducting field experiments in the area of Law and Economics and Public Choice. Unorthodox treatments are also hard to implement in Law and Economics, as the law itself presents a natural constraint on design possibilities (for example, you cannot increase the penalty rate for non-compliance when exploring tax evasion). Moreover, tested treatments could be viewed as potentially harmful or against the interests of government agencies and their decision makers. The results themselves can lead to opposition of the agencies under exploration. Mujcic and Frijters (2020) conducted

[11] For a detailed discussion on field experiments, see Harrison and List (2004) and Levitt and List (2009).

a well-crafted natural field experiment on racial bias, assigning test customers to board public buses with no money to purchase a fare. This placed bus drivers in the city of Brisbane, Australia into the dilemma of deciding whether or not to offer those customers a free ride. Using data from 1,552 transactions, they found strong evidence for a racial bias. White testers were twice as likely to get a free ride than black testers (72 versus 36 percent of the time) in the baseline treatment where testers simply wore plain casual clothing. However, as Ian Ayres, a Yale Law School professor, discussed in a *Forbes* article in 2015,

> [a]fter the City of Brisbane complained that the study encouraged fare evasion, the University initiated a complaint process against Professor Frijters and has ordered the authors to suppress this important paper. Blessed are those who are persecuted for righteousness sake. Instead of being persecuted, the authors should be praised for offering us a model for civil rights testing in the new millennium[12].

Natural or quasi-natural experiments are also part of the experimental toolkit. Law and Economics can benefit from exploring legal or rule changes. Reforms are particularly interesting from a Public Choice perspective. For example, Morton et al. (2015) take advantage of a voting reform in France to estimate the causal effect of exit poll information on turnout and bandwagon voting. Before the change in legislation, citizens in some French overseas territories voted after the election results had already been made public via exit polls from mainland France.

Moreover, history is full of external shocks that allow the exploration of natural experiments (Diamond and Robinson 2010). Scholars, have, for example, explored exogenous shocks, such as disasters, to derive insights into human nature that are more difficult to explore in the laboratory (see, e.g., Page, Savage, and Torgler 2014 for an exploration of risk-taking behavior after having suffered large-real world losses after a natural disaster). Of course, the risk that the observed outcome may depend on unexplored factors increases when moving from lab to field and from field to natural experiments. In a natural experiment, no two human systems differ solely with respect to a specific variable of interest, and selection effects matter due to the lack of proper randomization. In addition, historical data suffer from data availability and variable operationalization (Diamond and Robinson 2010)[13]. An example of a quasi-natural setting is offered by a study from Skali, Stadelmann and Torgler (2021), who explore

[12] https://www.forbes.com/sites/whynot/2015/02/24/a-duty-to-disgorge/

[13] In such a situation a natural experiment can be combined with an "Analytic Narratives" approach that pays attention to stories, accounts, and context by applying formal lines of reasoning to locate and explore mechanisms that shape the interplay between strategic actors (see Bates et al. 1998).

the sudden increase of military threat to Switzerland during the two world wars, which was outside the control of Swiss institutions and unrelated to pre-war conditions in the country. The goal of the study was to analyze trust in government in times of crisis, looking at constituent adherence to government recommendations. When discussing natural experiments, it is also worth referring to the work of Elinor Ostrom and her expertise in collecting extensive real-life cases from around the world; systematically comparing institutions (Frey 2010)[14] by observing different types of commons in the spirit of natural experiments. As Ostrom and Ostrom (2004, p. 114) stress,

> [w]ithout the capacity to undertake systematic, comparative institutional assessments, recommendations of reform may be based on naïve ideas about which kinds of institutions are "good" or "bad" and not on an analysis of performance" (p. 114).

Together with her husband Vincent Ostrom, Elinor Ostrom illuminated how institutions affect performance. They applied what Jim Cox (2013) classified as "intellectual entrepreneurism" (p. 482), promoting local, national, and international research collaborations to collect systematic field data centered on the commons and governance. Their goal was to understand real problems and managerial solutions to social dilemma and common pools, building the bridge between political science and economics. It should be noted that Elinor and Vincent Ostrom were strongly influenced by Buchanan and Tullock's (1962) *The Calculus of Consent* in their effort to understand the logical foundations of constitutional democracy (Ostrom and Ostrom 2004). They were impelled to explore the logical foundations for order in human societies, which was a long-standing intellectual inquiry (as can be seen by the works of Hobbes, Locke, Montesquieu, Hume, Kant, Adam Smith, Tocqueville, and the American federalists). Elinor Ostrom's (e.g., Ostrom 1990) work has demonstrated that the large variety of ways public and private goods are supplied depends on the specific conditions. Humans are able to overcome free riding problems in open access goods, which shows that humans have

[14] See, e.g., Ostrom (1990, 2000) for an understanding of the large-scale empirical studies of alternative regimes to understand the success and failure of institutions. The evolutionary biologist David Sloan Wilson recounts in his latest book *This View of Life: Completing the Darwinian Revolution*: "A life-changing experience for me, after deciding to apply evolutionary theory to the solution of real-world problems, was working with Elinor Ostrom… Lin's work was indeed revolutionary… Lin led an effort to compile and analyze a worldwide database of groups that attempt to manage common-pool resources… Lin's great achievement was to derive eight *core design principles* (CDPs) that made the difference between success and failure… CDP 1. STRONG GROUP IDENTITY AND UNDERSTANDING OF PURPOSE … CDP 2. PROPORTIONAL EQUIVALENCE BETWEEN BENEFITS AND COSTS… CDP 3. FAIR AND INCLUSIVE DECISION-MAKING… CDP 4. MONITORING AGREED-UPON BEHAVIORS… CDP 5: GRADUATED SANCTIONS… CDP 6. FAST AND FAIR CONFLICT RESOLUTION… CDP 7. LOCAL AUTONOMY… CDP 8. POLYCENTRIC GOVERNANCE" (pp. 114-120).

the capacity to create good institutional conditions (Frey 2010). In her APSA Presidential address she also shows the power of applying different methods:

> As an avid field researcher for the past 35 years I know the importance and difficulty of testing theory in field settings – particularly when variables function interactively. Large-scale field studies will continue to be an important source of empirical data, but frequently they are a very expensive and inefficient method for addressing how institutional incentives combine to affect individual behavior and outcome. We can advance much faster and more coherently when we examine hypotheses about contested elements among diverse models or theories of a coherent framework. Careful experimental research designs frequently help sort out competing hypotheses more effectively than does trying to find the precise combination of variables in the field. By adding experimental methods to the battery of field methods already used extensively, the political science of the twenty-first century will advance more rapidly in acquiring well-grounded theories of human behavior and of the effects of diverse institutional arrangements on behavior (p. 17)

To measure the relative importance of experimental studies in the area of Law and Economics and Public Choice, I conducted a very simple analysis using a brute force approach: via an advanced search in Scopus and Web of Science (performed January 19), I searched for publication records of target journals in which the following words or phrases are found either in the title, abstract, or keywords of the article: "law", "law & economics" or "law and economics" or "economic analysis of law", "public choice", "experiment", "laboratory experiment", "field experiment", and "natural experiment". As target journals I selected *Public Choice (PC)*, *Journal of Law and Economic*s (*JLE*), and *Journal of Law, Economics and Organization (JLEO);* the latter two reflect the key two traditions in Law and Economics, representing Chicago (*JLE*) and Yale *(JLE*). As a baseline I added top economics journals: *American Economic Review (AER), Econometrica (ECMA),* the *Journal of Political Economy (JPE)*, the *Quarterly Journal of Economics (QJE)*, and the *Review of Economic Studies (ReStud).* The search queries were limited to Article document type (e.g., Editorials and post-publication such as Reviews, Notes, and Errata are excluded). In addition, I also obtained the number of articles in each target journal (identified using journal ID) in order to calculate the percentage of articles with each key phrase, differentiating between results that cover the entire journal availability period and the period since 1985. The search results were exported into CSV files and imported into Stata for analysis. To measure the relative importance of experimental studies I calculated the ratio to the total number of articles in a particular journal. The results are presented in *Table 1*. It should be noted – and emphasized – that such an analysis

does not identify all possible experimental papers, nor does it provide a fully comprehensive allocation to those different experimental approaches due to its brute force approach. I find that *Public Choice* and the *Journal of Law Economics and Organization* have relatively higher representation of lab experimental papers compared to *Journal of Law and Economics* and the other top five journals, even higher than *Econometrica* (known to publish important lab experimental studies). This indicates the importance of lab experiments in the field of Public Choice and that there are differences in terms of publishing lab experimental studies within the Law and Economics traditions (assuming that the journals are a good representation of those different traditions). On the other hand, field experiments are more dominant in the *Journal of Law and Economics* than in *Public Choice* and the *Journal of Law, Economics, and Organization* when looking at Scopus, but not when looking at Web of Science where the percentage of field experimental papers are higher in the *Journal of Law, Economics and Organizations* than the *Journal of Law and Economics*. However, all the top five journals publish substantially more field experimental articles (in relative terms) than those three journals. The *Journal of Law and Economics* has a larger number of natural experimental papers than any of the journals listed in Table 1. Those results are consistent for different time periods and both datasets, Scopus and Web of Science. The *Journal of Law, Economics, and Organization* tends to publish more natural experiments than *Public Choice* and the other top five journals, with the exception of *Quarterly Journal of Economics*. As discussed beforehand, natural experiments provide a natural avenue through which to explore legal changes.

Table 1: Importance of Experimental Studies

Journal	Lab experiments	Field Experiments	Natural Experiments	Availability	Founded
Scopus					
JLE	0.16%	0.48%	1.60%	1978	1958
JLEO	1.04%	0.00%	0.74%	1985	1985
PC	0.84%	0.06%	0.71%	1966	1966
AER	0.32%	1.04%	0.61%	1978	1911
Ecma	0.55%	1.04%	0.07%	1974	1933
JPE	0.34%	1.69%	0.59%	1969	1892
QJE	0.37%	2.24%	0.97%	1886	1886
ReStud	0.72%	0.91%	0.52%	1933	1933
Since 1985					
JLE	0.15%	0.46%	1.53%		
JLEO	1.04%	0.00%	0.74%		
PC	0.69%	0.05%	0.59%		

AER	0.29%	0.95%	0.55%	
Ecma	0.54%	1.00%	0.13%	
JPE	0.33%	1.64%	0.57%	
QJE	0.12%	0.73%	0.32%	
ReStud	0.43%	0.54%	0.35%	
WoS				
JLE	0.00%	0.21%	0.77%	1958
JLEO	0.95%	0.27%	0.68%	1989
PC	0.27%	0.08%	0.54%	1969
AER	0.05%	0.63%	0.37%	1911
Ecma	0.07%	0.34%	0.09%	1933
JPE	0.04%	0.42%	0.17%	1899
QJE	0.12%	0.69%	0.40%	1899
ReStud	0.22%	0.51%	0.28%	1933
Since 1985				
JLE	0.00%	0.32%	1.16%	
JLEO	0.95%	0.27%	0.68%	
PC	0.31%	0.09%	0.61%	
AER	0.08%	1.08%	0.63%	
Ecma	0.14%	0.72%	0.14%	
JPE	0.11%	1.26%	0.51%	
QJE	0.33%	1.93%	1.13%	
ReStud	0.42%	0.96%	0.54%	

3 Behavioral Public Choice and Behavioral Law and Economics

A Behavioral Economics approach can be beneficial for various reasons when combining it with Public Choice or Law and Economics. As Brennan (2008, p. 477) stresses "any 'model of man' is a model of agent *motivations* – of agent *behaviour*". An application of a relative price in *comparative institutional context* requires some psychological assumptions. Thus, he argues that from a behavioral perspective homo economicus and homo politicus are different animals but differences in market and political behavior does not require a

> 'wholly' different model of man. On the contrary, it is this same model of man – the rational responder to incentive changes… I believe the much of public choice has got the 'behavioural implications' of that logic just plain wrong! Voters and consumers are the same, rational persons: but the considerations that drive them in the marketplace where their choices are decisive are not the same considerations that drive them in the ballot box" (p. 489).

Schnellenbach and Schubert (2014)[15] differentiate between "weak" and strong variants of Behavioral Public Choice, stressing that the former stream merely alters auxiliary assumptions on the content of utility function of the standard model (for example, voters care also about their citizen duty when going to polls) while the "strong" variant aims at explaining and not just postulating such motivational extensions. They provide an excellent literature overview of aspects such as voting paradox, the roots and consequences of expressive voting, retrospective voting, or the determinants of political preferences. Beyond that, they explore the normative question of what politicians should actually do – exploring incentives, rewards, and the process of policy making. Most interesting from a Law and Economics perspective is their discussion on the choices of bureaucrats and lobbyists. They argue that:

> voting behavior behind a veil of insignificance may lead people to abstract from own material interests. General-interest policy-making on broad issues that concern all or most citizens may therefore well be oriented at general norms, rather than particular interests of small, decisive coalitions. Nevertheless, a lot of scope for special-interest policy-making will remain, using laws targeted at small groups (p. 29).

Congleton (2019) provides an excellent analysis on the complementarities and overlaps between behavioral economics and the subjectivist strand of Virginia Political Economy. Legal scholars have also been interested in exploring the implications of cognitive biases to understand, for example, errors in public law and possibilities of amelioration, possibly also as a counterargument to a traditional Public Choice argument of inefficiency (Eskridge and Ferejohn 2001). However, by combining the interests of Public Choice with Law and Economics, a growing area of inquiry is finding answers to the question of how and whether institutions can be designed to eliminate or at least reduce bad decision making due to, for example, biases or prejudices. The legal scholar William Eskridge and the political scientist John Ferejohn, who is currently the Samuel Tilden Professor of Law NYU, argue that:

> [t]he most interesting issues of public law (for us) are those relating to institutional design and function. When thinking about statutory interpretation, judicial review, and legislative and administrative procedures, it is useful to have a theory about how the governmental system

[15] In their published version in European Journal of Political Economy (Schnellenbach and Schubert 2015), they changed the wording to Behavioral Political Economy despite mentioning in their Working Paper version that they find it more convenient to call the subfield Behavioral Public Choice (p. 2). The notation Behavioral Political Economy was provided by DellaVigna (2009) to indicate that "politicians change their behavior to respond to voter biases" (p. 47) (e.g., politician response to limited attention of voters). Although one can argue that a substantial number of studies on voting are done by scholars that see themselves as political economists, I am more sympathetic with the original classification.

> works in our regulatory state, how it breaks down, and how it leads to decisions that do not serve the public interest (Eskridge and Ferejohn 2001, p. 616).

Such a question has implications for Law and Economics. Elster (2013), for example, argues that:

> In criminal jury selection[16], the aim is not to eliminate jurors who would be unsuitable in any trial, but only those with biases and prejudices that might be triggered by particular aspects of a given case or a given defendant. Allegedly, female jurors are hard on female defendants, middle-class jurors soft on middle-class defendants, and overweight jurors either hard or soft on overweight defendants (p. 6).

The use of blind committees is one response to such prejudices[17]. Judges may tend to anchor on the initial impressions of what the criminal has done and may therefore interpret operative legal texts through the lens of such an anchor bias (Eskridge and Ferejohn, 2001). Experimental evidence by Kelman, Rottenstreich and Tversky (1996) also indicates that context elements influence jurors and judges. The authors conclude that from a normative perspective the relevance of context-dependency is more problematic in legal decision making than in consumer choices, as legal decisions are guided by explicit principles that declare the factors that are relevant or are not relevant (p. 76).

It is therefore important to understand the action arena – the social space where individuals interact, exchange goods and services, solve problems, fight, or dominate one another – to analyze, predict, and explain behavior within institutional arrangements (Ostrom and Ostrom, 2004). Public Choice models have tended historically to take variables specifying the situation and motivational and cognitive structure of actors as givens (Ostrom and Ostrom 2004). Behavioral economics insights allow further opening of the black box of actors' motivational and cognitive structure. For example, jurors are affected by hindsight biases[18], anchoring biases, recency and primacy biases, sunk cost fallacy or planning fallacy, and biases

[16] Selecting members of juries, committees, or assemblies is challenging as it is hard to understand the dynamics in a group, or to detect domineering individuals or spoilers: "The two disastrous decisions of the 1848 French constituent assembly to allow Louis Bonaparte to be elected as deputy and to have the President chosen in direct elections were arguably due to the eloquence of a few deputies, notably Lamartine. To prevent candidates from standing on the ground that they are too eloquent is hardly imaginable. Sometimes, the best we can do is to pursue *impure procedural* justice" (Elster 2013, p. 18).

[17] A famous and highly cited study by Goldin and Rouse (2000) indicates that blind auditions in symphony orchestras foster hiring impartiality and increase the proportion of women in symphony orchestras.

[18] Jolls, Sunstein, and Thaler (2020): "Hindsight bias will lead to juries making negligence determinations to find defendants liable more frequently than if cost-benefit analysis were done correctly – this is, on an ex ante basis" (p. 38). See also Rachlinski (1998) for an analysis on hindsight biases.

that arise through interaction (Elster 2013)[19]. Committees tackling challenging issues (e.g., global warming) may reach disastrously wrong conclusions not just by succumbing to interest groups (e.g., of industrial polluters), but also by making simple but potentially predictable mistakes in reasoning (Eskridge and Ferejohn 2001). Actors often do not have complete or well-ordered preferences, or complete information or information-processing capabilities. They also may not maximize the net value of the expected return, and therefore reach fallible outcomes, which suggests the value of exploring different institutions that provide different incentives for learning from mistakes (Ostrom and Ostrom 2004). For example, a Behavioural Public Choice approach can contribute to better identifying distorting influences on decisions reached by different procedures, and identify the implications for institutional designs to reduce their impact. Elster (2013) refers to how institutions may contribute to epistemic competences since "passion, prejudice, and cognitive biases can undermine that competence" (p. 84). Whether to repress or harness the element of passion and vice is a long historical debate, as Albert Hirschman (1997) demonstrates in *The Passions and The Interests*.

Elster (2013) provides some suggestions on how to neutralize potential biases. For example, to neutralize hindsight bias and anchoring bias one could transfer certain tort cases from juries to judges, although he adds the disclaimer that "the jury seems to be out, as it were, on the question whether judges are in fact less prone that juries to cognitive illusions of this kind" (p. 86). Hoffrage et al. (2000) asked 27 professionals in Germany who would soon qualify as judges and 127 advanced law students to evaluate two criminal-court case files involving rape. Both cases reported a DNA match between a DNA sample from the defendant and a sample recovered from the victim. Otherwise, there was little reason to suspect that the defendant was the perpetrator. Expert testimony reported the statistics of the recovered DNA profile. When the statistics were expressed as probabilities, only 13% of the professionals and under 1% of the law students correctly inferred the probability that the defendant was the source of the trace; yet, when the identical statistics were stated as natural frequencies, a substantially larger number made the correct inference (68% of the professionals and 44% of the law students). Consequently, different ways of providing the information altered the verdicts. Information provided as probability led to the verdict of guilty among 45% of the professionals and 55% of the students. On the other hand, only 32% and 33% led to guilty when the statistics were expressed as natural frequencies.

[19] See also studies cited by Elster (2013, p. 86).

Looking back at the history of Behavioral Economics, it does not come as a surprise (assuming I am not affected by hindsight bias) that the group around Vernon Smith and Charlie Plott clashed with the group around Kahneman and Thaler (Heukelom 2014). Smith and Plott were keen to understand what steers individuals toward the rational equilibrium rather than just looking at how individuals deviate from theoretical defined equilibrium. Smith (1989), for example, argued that:

> the psychologist's "reference frame" descriptive paradigm performs well in explaining subject introspective responses, and their short-run, or initial, decision behavior, but it provides no predictive theory of reference frame adjustment over time (p. 166).

Tversky and Kahneman also clashed with Gigerenzer (for a detailed and fascinating discussion see Lewis 2017). Gigerenzer, in line with Vernon Smith[20], emphasized ecological rationality; putting weight on the ecology of the environment in which decisions take place as agents respond to different incentives in different institutional environments and contexts. In a book of essays in memory of Herbert Simon – authored by Simon's friends and close colleagues, combining personal feelings and stories with intellectual tributes (Augier and March 2004) – Gigerenzer (2004) recounts a discussion with Herbert Simon on a walk through the Carnegie Mellon campus. Gigerenzer argued that Kahnehman, Tversky, and others' notion of cognitive illusion and biases are inconsistent with Herbert Simon's concept of bounded rationality:

> A systematic deviation from an "insane" standard should not automatically be called a judgment error, should it? "I hadn't thought about it in this way", Herb replied. Why is bounded rationality not the same as irrationality? Herb has given the answer in the form an analogy. Bounded rationality is like a pair of scissors: the mind is one blade, and the structure of the environment is the other. To understand behavior, one has to look at both, at how they fit. In other words, to evaluate cognitive strategies as rational or irrational, one also needs to analyze the environment, because a strategy is rational or irrational only with respect to an environment, physical or social (p. 397)[21].

Tversky and Kahneman felt attacked, angry, and irritated by Gigerenzer's article titles such as "How to Make Cognitive Illusions Disappear: Beyond "Heuristics and Biases" (see also Lewis 2017). In their *Psychological Review* article responding to Gigerenzer's critique, they tried to

[20] See, e.g., Smith (2008).
[21] Simon (1990): "Human rational behavior (and the rational behavior of all physical symbol systems) is shaped by a scissors whose two blades are the structure of task environments and the computational capabilities of the actor" (p. 7).

show that he misrepresents their theoretical position and ignores critical evidence (Kahnman and Tversky 1996). Gigerenzer's (1996) response to the critique was to stress that they incorrectly asserted the simple claim on cognitive illusion disappearance: "The issue is not whether or not, or how often, cognitive illusions disappear. The focus should be rather the construction of detailed models of cognitive processes that explain when and why they disappear" (p. 592). Binmore (1999) also concludes his article with the observation that:

> [o]ur comparative advantage as economists is that we not only understand the formal statements of economic theory, but we are also sensitive to the economic environments and institutions within which the assumptions from which such statements are deduced are likely to be valid. Just as chemists know not to mix reagents in dirty test tubes, so we know that there is no point in testing economic propositions in circumstances to which they should not reasonably be expected to apply (p. F23).

Some legal scholars have also referred to problems when focusing on cognitive biases:

> [C]ognitive biases have grown like weeds in a vacant lot. As documented biases have multiplied, it has become harder to reach conclusions from them. In any given institutional situation, there will be several potentially applicable-and potentially cross-cutting-biases. Furthermore, there is little basis for understanding how the different biases interact with one another. When do they cancel one another out? When they cut in the same direction, are they additive or multiplicative? What difference does context make? (Eskridge and Ferejohn, 2001, p. 18).

But Behavioral Economics can help in providing insights when designing institutions, particularly for procedural aspects involved in paying attention to the way information is presented or processed, an area also relevant for Law and Economics.

Referring to jury trials, Elster (2013) points out that witnesses appear in open courts, so that jurors base their judgment of credibility on verbal responses when being cross-examined as well as nonverbal behavior patterns. He mentions an example provided by Hans and Vidmar of a jury trial in which a:

> 'woman claimed that as a result of an automobile accident she continued to have severe back pain. During discussions, [a female juror] observed that she was wearing high heels, and that when she stepped off the raised witness stand after her testimony, she didn't even wince'. As a man might not have noticed this discrepancy, the anecdote also illustrates the value of diversity

> on the jury.) If witnesses simply signed written depositions, as they did in France under the ancien régime, such sources of information would not be available (pp. 84-85)[22].

Sunstein (1996) also stresses that "a lawyer who wears a loud tie to court will be signalling something distinctive about his self-conception and his attitudes toward others" (p. 2021). A *PNAS* study looking at judicial rulings on parole decisions shows that the percentage of favorable rulings dropped gradually from around 65% to nearly zero but returned to around 65% after a break in which judges eat a meal, which provides empirical support that extraneous variables can influence judicial decisions (Danziger, Levav and Avnaim-Pesso 2011). In his latest book, *Pre-Suasion,* Cialdini (2016) looks at 125 cases involving fabricated confessions due to pressuring suspects. Even after renouncing statements and pleading not guilty, convictions happened in 81% of the cases[23].

Judges, being generalists, are prone to defer to agencies making policy judgments in areas that are highly technical (expert-deference bias) (Eskridge and Ferejohn 2001)[24]. Being a generalist means that judges have a broad but not deep understanding of the law:

> Who can study 900 issues in depth? With luck, pluck, and awareness of intellectual limits, a judge may succeed in holding the rate of error as low as 5%. You may rest assured that we lack the rigorous training in music, metaphysics, mathematics, and gymnastics that Plato thought essential to his guardians – and that the process for selecting judges does not check whether the candidate has the acquaintance with the conduct of the Peleponnesian Wars that Learned Hand thought essential (Easterbrook 1990, p. 779).

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[22] Elster (2013) also refers to experimental evidence indicating that the defendant's appearance in court may also trigger biases (e.g., wearing prison attire versus personal clothing).

[23] He refers to biases against suspects recommending: "By the way, if you ever found yourself in the interview situation I described, and you chose to end the session and demand a lawyer, is there anything you might do to reduce police suspicions that you therefore have something to hide? I have a suggestion: blame me. Say that, although you'd like to cooperate fully on your own, you once read a book that urged you to consider extensive police questioning unsafe, even for innocent individuals. Go ahead, blame me. You can even use my name. What are the police going to do, arrest me on a trumped-up charge, bring me down to the stationhouse, and employ Machiavellian tactics to gain a false confession? They'll never win a conviction, because I'll just find the camera and move my chair" (p. 65).

[24] Other biases listed by the authors are, for example, overconfidence in the areas judges know well such as discrimination law, civil and criminal procedure, and the common law fields (contract, torts, property), hindsight biases, availability and representativeness heuristics (e.g., overvalue and overgeneralization the experience of litigants before them), text fetishism, and path dependency (pp. 631-632). Cooter (1983) also refers to expectation biases toward optimism: "The conventional theory holds that trial courts decide routine cases by ascertaining the facts and combining them with the law. The combination of facts and laws establishes the right of one party to win the case. Resolving a dispute in this way is said to be a decision on the merits of the case. In many disputes, both sides believe they would win a trial decided on the merits. Thus, the psychological origin of the bias toward optimism is believing that one's own actions are free from fault, or, in a word, self-righteousness causes optimism" (p. 109). The order in which jurors express the views can also affect outcomes (Pi, Parisi and Luppi 2014).

Behavioral insights can also be valuable where feedback is low or almost non-existent, which matters in the legal process as acknowledge by Wald's (1992) reflection on being a judge:

> Within judging, you almost never get feedback. I have little idea, when after thirteen years and more than 500 published opinions, which cases I ruled correctly and which I flubbed. In that respect, I feel much like the blindfolded dart thrower who, no matter how hard he practices, never improves (p. 174).

The idea of nudging was originally suggested by Matthew Rabin in a 1997 conference aiming at identifying a public policy that would appeal across the political spectrum (Loewenstein and Chater 2017). After that, two papers drew inspiration out of it, namely Thaler and Sunstein (2003) published in the *AER Papers and Proceedings* and Camerer et al.'s (2003) article published in the *University of Pennsylvania Law Review* – which can be seen as the proper precursor of Thaler and Sunstein's (2009) famous *Nudge* book. Choice architecture is important to understand as everyone, including lawyers, is affected by choice architecture. A core argument is that small changes can have substantial effects. Default rules already mentioned in Camerer et al. (2003) have proven to be one of the most effective and successful nudges (Sunstein 2019). Research has also shown the importance of aspects such as simplification, the use of social norms, the increase in ease and convenience, disclosure, warnings and other graphical representations, precommitment strategies, reminders, and eliciting implementation intentions or informing people of the nature and consequences of their own past choices to achieve behavioral changes (Sunstein 2019). However, some critics have argued that in a free society, people have the right to be wrong or to make mistakes and learn[25]. But Thaler and Sunstein (2009) have responded to such an attack with:

> But how much learning do you think is good for people? We do not believe that children should learn the dangers of swimming pools by falling in and hoping for the best. Should pedestrians in London get hit by a double-decker bus to teach them to "look right"? Isn't a reminder on the sidewalk better? (p. 244).

However, while applying Hirschman's (1991) *Rhetoric of Reaction* analytical tools, Sunstein (2017, 2019) warns that nudges can also be futile, can lead to perverse consequences, or can jeopardize other important goals. Loewenstein and Chater (2017) criticize how the appeal of nudges has overshadowed alternative policy instruments that are informed by behavioral economics, channeling behavioral economics into a narrower range of policy problems.

[25] For an argument that laws devised to prevent cognitive errors and misjudgments prevent learning see Klick and Mitchell (2006) and Ulen (2014).

Traditional interventions such as taxes, subsidies, conventional legislative actions, or mandatory disclosure of information can have a behavioral economics rationale:

> Indeed, the question of whether behavioural factors can justify 'hard' government action, rather than the 'libertarian' paternalism of nudges, in which choices are merely made more or less easily available or appealing, is an active area of debate (p. 30). … But behavioural economics, more broadly, should in the longer term also help shape the formulation and direction of policy. Often, we suspect, the behaviourally appropriate policy will involve the reduction of choice by legislation: hard paternalism may, in many instances, be more effective than soft paternalism. We should be concerned if politicians and journalists form the impression that a good nudge is generally better than good legislation (p. 42).

In general, a Behavioral Public Choice and Behavioral Law and Economics approach complements a purely Behavioral Economics approach by providing insights into what agents will do, rather than just where they fall short, which does not allow for a descriptive theory of the regulatory state. Jolls, Sunstein and Thaler (2000) also acknowledge that:

> Availability entrepreneurs in the private sector can heighten the demand for regulation, and public-sector availability entrepreneurs can take advantage of, and heighten, this effect, by advocating anecdote-driven policy. Thus, public choice accounts of legislation can work productively with behavioral accounts; there is a good deal of synergy between behavioral mechanisms and interest group leaders, many of whom are amateur (or professional?) behavioral economists (p. 48)

In addition, focusing only individual decision-making biases does not help take into account the importance of group and institutional decision-making in the real world[26]. It is unclear which cognitive biases operate at the institutional level. In addition, bad cognition by public officials can open up opportunities for rent-seeking activities (Eskridge and Ferejohn 2001). In the end a Behavioral Public Choice and Law and Economics approach can provide insights into how to structure lawmaking to reduce biases. According to Ostrom (1998), a behavioral approach that considers boundedly rational and moral human being opens up new questions of major importance such as[27]:

[26] Eskridge and Ferejohn (2001, pp. 621-623) discuss a set of biases at the committee level, such as availability heuristics (overgeneration of dramatic and emotional events), arbitrary starting point and filter of factual evidence (anchoring and cognitive dissonance), deference to experts who may tend to be overconfident (overconfidence bias, expert-reference bias) etc.

[27] Vincent Ostrom (1990) argues: "Until we have a language that is appropriate to an understanding of what it is that is constitutive of democratic societies, people cannot learn how to maintain such societies in a world of increasing complexity and interdependence" (p. 261).

How do individuals gain trust in other individuals? How is trust affected by diverse institutional arrangements? What verbal and visual clues are used in evaluating others' behavior? How do individuals gain a common understanding so as to craft and follow self-organized arrangement? (pp. 16-17)[28].

4 Core Challenges Suggesting a Public Choice Analysis in Law and Economics

4.1 Law is Often not Implemented

One of the problems in emerging and developing countries is that law is often not implemented (Basu 2018). Basu powerfully recollects his experience struggling to reduce corruption as chief economic adviser to the government of India. He "discovered a profusion of laws that existed on paper but were collectively ignored" (p. 11), which led him to think more about why some laws were followed while others were overlooked. As Ostrom and Ostrom (2004) have stressed: "In a system that is not governed by a 'rule of law,' there may be central laws and considerable effort made to enforce them, but individuals attempt to evade rather than obey the law" (p. 125). Legal enforcement no longer works when large groups disregard the law (Gächter 2014). As Basu (2018) notes "[i]t is the state gives law its authority" (p. 7). Experiments can provide valuable guidance in understanding under what sort of conditions individuals and groups follow or ignore rules. This requires the knowledge on social norms[29] and culture that form the foundation of institutions (North 2005), which is a combination of beliefs, values, and preferences (Mokyr 2017)[30]. Culture involves social learning from others (Henrich 2017)[31]. Ideas and tacit or codified knowledge also change values. Brennan and Buchanan (1988) use the following example:

[28] Stadelmann and Torgler (2013), for example, looked at voting behavior in Switzerland over a period of 160 years. They find that a higher level of complexity (more referenda held on the same day) increases constituents' reliance on parliamentary recommendations when voting.
[29] See, e.g., Eric Posner (2000).
[30] Basu (2018) refers to the importance of studying not only the nation's law, but also informal laws as systems that can work without the law. For example, the caste rules in India are not backed by the law. For a discussion of obeying social customs using cost-benefit approach see Akerlof (1976), who stresses that most individuals have a positive utility for obeying social customs or participating in activities that are conducted up to the point where marginal costs are equal to marginal benefits.
[31] For a recent contribution on how culture transformed the human species, see Boyd (2018).

> Suppose that some Kinsey-like report has revealed that, in fact, over seventy percent of married couples in the United States indulge in some sexual practice commonly believed to be decidedly eccentric and perhaps morally somewhat dubious. It seems plausible to suggest that the release of this information may serve to change sexual standards in the direction of this practice: the 'facts' somehow serve to legitimize the practice. The charge that 'everyone does it' is normally regarded as at least a presumptive argument in favor of 'doing it' oneself (p. 183).

The empirical evidence on social learning is substantial; an existing body of experimental work has demonstrated that conditional cooperation and pro-social behavior matters (for an overview see Frey and Torgler 2007). Some have even tried to derive human types such as defectors, collaborators, or conditional cooperators (Fischbacher et al. 2001). However, Frey (2010) criticizes that such a human type classification is often done irrespective of institutional conditions, stressing that Ostrom's work indicates these types behave quite differently according to the specific institutional conditions in which they are engaged.

Meaning, consensus, or social accountability are factors that define legitimacy, circumstances – and context matters. As Vincent Ostrom (1993) points out, "[a] single, universal, and comprehensive code of law applicable to all mankind is an empirical impossibility" (p. 174). Law and Economics requires the merging of norms and law together. Basu (2018), for example, points to India's case system as an example: "[w]hile it is not backed by the law, its social code is so well structured and so well enforced that it calls into question whether can draw a meaningful distinction between the law and custom" (p. 96).

4.2 Corruption

Practical corruption control policies and plans have often failed, and Basu (2018) suggests that one reason might be the flaw in the way scholars conceptualize Law and Economics. He argues that corruption control requires careful modeling of the functionaries of the state, which he sees as a key weakness of traditional Law and Economics. I have argued in this paper that an emphasis on a Public Choice approach can reduce this shortcoming. Law violations are often perpetrated in connection with state officials and law enforcers. Basu (2018) further criticizes that the standard discipline of Law and Economics is unable to give satisfactory answers "what makes some laws tick and other get violated and corrupted… The failure to understand corruption and, as a consequence, our ineptness in curbing it, is one of the big failures of law and economics" (p. 7). He discusses India's law on the Prevention of Corruption of Act, 1988;

under this law, the taker and the giver of bribes are treated as equally guilty, which means that whistle blower activities are reduced once a bribe is paid because the interests of bribe giver and taker are fully aligned (both are punished). An introduction of asymmetric punishment offering legal immunity to the bribe givers would increase the chance of the bribe taker getting caught (e.g., via whistle blowing) and may therefore reduce the incentive to request a bribe in the first instance. An ability to report the event online, for example, may reduce barriers to blowing the whistle. Cooter and Schäfer (2012) even recommend to provide a refund of the bribe by government after reporting the bribe. In addition, India's system of providing subsidized food to poor households ("right to food") did not work efficiently as over 40% of the food grain collected by the government for distribution to poor households leaked out of the system. Poor households were turned away or were sold the food on the open market at higher prices, turning away the poor who came to claim their subsidized rations. Shop owners used arguments such as supplies had run out, or did not arrive, or they provided adulterated grain (Basu 2018, pp. 18-19). Such behavior does not come as a surprise for a Public Choice scholar. Basu (2018) correctly stresses that subsidies should have been given directly to the poor in the form of small basic income (food stamps, vouchers, or plain cash) to allow them to buy the food needed from an ordinary private seller. When introducing laws around corruption, a Public Choice approach can help in identifying problems. Regulatory restraints are a strong foundation for corrupt activities (Rose-Ackerman 1978). Research on corruption has shown the power of a Public Choice approach in understanding corruption (e.g., Rose-Ackerman 1997, Abed and Gupta 2002, Kunicova and Rose-Ackerman 2005). In addition, field (Dong et al. 2012) and experimental results (Abbink et al. 2018) indicate that when corruption is more widespread, it makes corruption more tolerable. Conditional corruption matters as bureaucrats respond to (a lack of) stigma and ostracization (Basu 2018). Overall, a good understanding of how politics works is essential to understand law enforcement in the real world:

> Suppose now you have the capacity to catch and prosecute n corrupt persons. Which n corrupt persons will you pick? In the divisive world of politics, if you pick your friends and those in your party and begin to punish them, you will soon be alone and isolated. Your friends and party will desert you, and it is not the case that the opposition will be so appreciative as to become your supporters. Politics does not work that way. So it will be natural for you to go after the corrupt in other parties and the opposition camp. This means that what began as a genuine campaign to end corruption ends up as a witch hunt against opposition parties and individuals who criticize the leader (Basu 2018, pp. 143-144)

4.3 Tax Compliance

Research on tax compliance or tax evasion was strongly influenced in the beginning by Gary Becker's (1968) economics of crime framework (Allingham and Sandmo 1972). However, such a traditional economics-of-crime approach to tax compliance, while containing many insights, has shown to be inadequate as a framework for an understanding into why people pay taxes (Andreoni et al. 1998, Alm 1999, Kirchler 2007, Torgler 2007, Alm and Torgler 2011). Experiments in tax compliance have provided particularly strong evidence regarding the inadequacy of that approach (Alm 1999, 2012, 2019, Torgler 2002).

The power of a Public Choice approach also matters here as strong empirical evidence demonstrates that institutions, governance, and social norms matter (Torgler 2007). Taxation and public finance issues are resolved through political channels, and the political equilibrium position reflects the balance (or imbalance) of political forces and institutions (Bird, Martinez-Vazquez and Torgler 2006). Taxpayers are sensitive to how the government uses its tax revenues. A sustainable tax system is based on a responsive government in which there is a strong connection between tax payments and the supply of public goods (Bird et al., 2006). The relationship between the state and taxpayers is not just a relationship of coercion of exchange. Aspects such as governance quality, democratic rights, local autonomy, trust in the government, the legal system, the tax administration, or state legitimacy[32] have a strong influence on tax compliance, tax morale, or shadow economy (Smith 1992, Feld and Frey 2002, Hanousek and Palda 2004, Torgler 2005, Alm and Torgler 2006, Frey and Torgler 2007, Torgler and Schneider 2007, 2009, Torgler, Schneider and Schaltegger 2010). Tyler (1997) argues that understanding what people want in a legal procedure helps appreciate the sources of public dissatisfaction with the law, and provides insights into what needs to be reformed to gain better public support for the law. Experimental evidence indicates that giving individuals the chance to vote on rules increases compliance (Alm, Jackson and McKee 1993, Feld and Tyran 2002, Torgler and Schaltegger 2005). To some extent, an economics of crime approach can be seen as being influenced by behavioralism. However, behavioralism has also stressed the power of rewards[33], and the tax compliance literature has not yet seriously explored the possibilities of rewards (Falkinger and Walther 1991, Feld, Frey, Torgler 2006, Koessler et al.

[32] See also Tyler's research (1990, 2006) on the importance of legitimacy in compliance decisions.
[33] see, e.g., Thorndike (1911, 1932) or Skinner (1938, 1953).

2019). The argument is that rewards could motivate desired behavior, if they are perceived as supportive of the desired behavior (Nuttin and Greenwald 1968). Some experimental studies have taken up these ideas and, in the controlled setting of the laboratory, have studied how rewards (announced ex ante) affect compliance (Koessler et al. 2019, Carillo et al. 2017, Dwenger et al. 2016, Brockmann et al. 2016, Fochmann and Kroll 2016, Bazart and Pickhard 2011, Kastlunger et al. 2011, Torgler 2003, Alm et al. 1992). To synthesize various insights, Kirchler and his co-authors developed a framework of tax compliance that highlights how tax compliance is influenced by two major determinants; namely, trust in authorities and power of authorities to detect and punish. The framework has allowed differentiation between voluntary and enforced tax compliance (see, e.g., Kirchler 2007, Kirchler, Hoelzl and Wahl 2008). Evidence indicates that trust and power foster compliance through different channels (Batrancea, Nichita, Olsen et al. 2019). Alm and Torgler (2011) also suggest three very different administrative paradigms: an enforcement paradigm, a service paradigm, and a trust paradigm (stressing that the third has been largely neglected).

4.4 Shitstorms/Firestorms

Christian Wulff, the former federal president of Germany, was accused of corruption, which let to his resignation. The accusation was afterwards rejected as unfounded (Rost, Stahel, and Frey 2016). Such shit- or firestorms act like tropical storms and rainfall, with a brief period of high intensity decreasing quickly and sharply (according to Frey and Ulbrich 2015, on average within a three-week window). It can perhaps be described as a state in which a community is obsessed (or manic) against an individual. Similar to witch hunts, the community becomes "obsessed with ideological purity and believes it needs to find and punish enemies within its own ranks in order to hold itself together" (Lukianoff and Haidt 2018 p. 99). Due to the intensity and subsequent reputation damage, such firestorms have a long-lasting detrimental impacts on the lives and careers of the targets (Frey and Ulbrich 2015), and can quickly turn people into a "persona non grata". A climate of fear surrounds the firestorm, such that many friends and bystanders may be afraid to defend the accused person, even when they know that the victim might be innocent (Lukianoff and Haidt 2018). On this topic, Bergesen (1978) provides an interesting discussion on political witch-hunts; first, they seem to appear in dramatic outbursts. Second, they are often framed as accusations of crime committed against the (sacred) nation (purpose) as a whole so as to draw symbolic opposition. Third, witch-hunts

are often related to petty or insignificant behavioral acts, which is a reason why these events are also termed as witch-hunts, affecting innocent people that are falsely accused. Bergesen cites Jacob Talmon who in his book *The Origins of Totalitarian Democracy* provides the following observations on the Reign of Terror during the French Revolution:

> To have remained silent on some past and half-forgotten occasion, where one would have spoken; to have spoken where it was better to hold one's peace; to have shown apathy where eagerness was called for, and enthusiasm where diffidence was necessary; to have consorted with somebody whom a patriot should have shunned; avoided one now deserved to be befriended; not to have shown a virtuous disposition, or not to have led a life of virtue-such and other "sins" came to be counted as capital offenses, classifying the sinners as members of that immense chain of treason comprising the foreign plot, Royalism, federalism, bureaucratic sabotage, food speculation, immoral wealth, and vicious selfish perversion (p. 21).

Anonymity in online media platforms has also triggered an increase of such shitstorms towards actors of public interest (Rost, Stahel and Frey 2016). The political process is quite vulnerable to it, and such firestorms have been analyzed using a social norm theory perspective (Rost, Stahel and Frey 2016). Understanding these collective obsessions also requires application of insights on punishment and ostracism, ridiculing, shaming, or outright banishment. Group moral indignation has taken those various forms since the time of the foragers (Boehm 2012).

Such shitstorms are interesting from a Law and Economics perspective as the legal procedures to fight against them are challenging (particularly when anonymity of the actors is guaranteed), costly, and time consuming (Frey and Ulbrich 2015). Top politicians are frequently affected by such shitstorms[34]. Thus, a Public Choice approach could be useful, as aspects around voice, representation, responsiveness, how much time a democratic process needs (time requirement and structure to achieve the benefit of democracy), fairness in handling controversial viewpoints and controversies in general, or the quality of exchanges in the political, are all at the core of dealing with shitstorms in the political process. Polarized interests and human factors such as *Schadenfreude* further promote such firestorms. As a human species we tend to like gossiping, which, from an evolutionary perspective, formed from important components of human interaction, communication, and exchange of information

[34] Further examples from Germany covering different sets of party members are: Joachim Gauck, Peer Steinbrück, Karl Lauterbach, Sebastian Edathy, Patrick Döring, Daniel Bahr, Volker Beck, Hans-Christian Ströbele, Daniel Cohn-Bendit, Dagmar Wöhrl, Angela Merkel, Jens Spahn, Christopher Lauer, or Johannes Ponader (Weichert 2014).

(Dunbar 2004)[35]. This also means that we are still in the process of understanding how human nature can handle the Social Web in which rules and norms are still quite unpredictable or chaotic and often not sustainable (Weichert 2014). In general, Bergesen (1978) stresses that:

> These ritual cleansing efforts, in which numerous diverse activities are given political meaning, are a consequence of a social system having a constitutional system that makes it highly immanent, where being immanent means that collective purposes and interests are infused into the organizations, activities, and actions that comprise everyday life (p. 28).

4.5 Constitutional Choices

The questions about the principles of behavior that operate at the level of constitutional choice remain open and underexplored (Plott 2014). People respect the law if they see a sense of legitimacy in the law (Basu 2018). Using experiments to explore how individuals design and choose institutions is a natural extension on studies that have narrowly focused on understanding behavior within institutions (Plott 2014). As Plott (2014) stresses, the time and cost of such experiments might be a challenge, but intellectual and scientific promise loom large" (p. 352). Buchanan and other Public Choice scholars can provide valuable guidance in the design of such experiments that are also relevant for the Law and Economics environment. In additional, an institutional analysis can provide insights in understanding the working rules that individuals use when making decisions and where those rules come from (Ostrom and Ostrom 2004), keeping Buchanan's (1975) check list as a roadmap:

> I want an independent judiciary to enforce the rules that exist, however these might have emerged. I want this judiciary to restrict the actions of legislative bodies and administrative agencies that try to modify these rules when they are not legitimately empowered to do so. I want the courts to start once again to take a hard look at the constitutionality of legislative and executive actions, but in terms of the existing rules of the game, and not in terms of the judge's own social or ethical ideals. The tragedy of Earl Warren's court lay not in its activism but in its avowal of a role for the judiciary that is wholly inconsistent with the structure of constitutional democracy (p. 904).

[35] Dunbar (1996): "We want the intimate details, the gossip, their innermost thoughts and feelings, not detailed technical analysis of method acting or parliamentary procedure. We want to know how events affected them, how they reacted to the highs and lows of life, what they thought about their friends and relations, the indignities they suffered, the triumphs they took part in" (p. 6).

4.6 Globalization and International Organizations

The presence or absence of law enforcement as the ability to enforce codes and laws are challenging at the international level (Basu 2018). A good example for a functioning system is the Internal Court of Justice in The Hague. However, in many situations, international organisations are toothless tigers. Frey (1997) provides a thorough analysis on the Public Choice of international organizations. He discusses constitutional issues stressing that the formation of international agreements can be analyzed with the help of the club theory, which stresses the voluntary nature of membership. He emphasizes that the choice between voting rules and voting weights needs to be taken behind the "veil of uncertainty" when possible interests and coalitions between states are unknown. When discussing delegates of international organizations, he argues that their preference functions also contain prestige or a peaceful conflict-free life. Such delegates tend to strongly support the organization to which they are attached to; favoring or giving the international organization a monopolistic position and making it difficult for a nation to leave the international organization. This can lead to differences between the delegates of international organizations and individual citizens. Consequently, delegates use the rhetoric of a "general national interest" (p. 118). According to Frey (1997), a Public Choice approach also emphasizes the bureaucracy and efficiency issues that are more pronounced in international organizations than at the national level. Measuring output and efficiency are extremely challenging at the international level and bureaucrats take advantage of this situation. International organizations tend to yield to the demands of the major donors (see Frey and Schneider 1986). He emphasizes the importance of increasing the number of empirical studies that test theoretical propositions provided by Public Choice. Meanwhile, a substantial number of new studies have emerged in the last decade, thanks to specialized journals such as *Review of International Organizations*, providing a strong empirical Public Choice focus.

Basu (2018) stresses that globalization "is increasingly bringing under the same roof such totally divergent cultures. The conflict that we see around us has roots in this. The law of the nation-state is not adequate to take on this new challenge" (p. 197). He advocates for reforms and a redesign of a fair and democratically organized system, but also some global rules that curtail the powers of leaders of nations:

> [t]here should be prior global rules that place restrictions on what Donald Trump or Xi Jinping or Theresa May may do, just as the governors of states in the United States have restrictions imposed on them by the federal government (p. 201).

5 Conclusions

Law is a social construct (Green 2012) and a behavioral system (Ulen 2014) highly embedded in institutions and the culture, and an expression of human social values and commitments (see Sunstein 1996a, 1996b for a discussion on law's expressive function). It is problematic to pretend its objectivity. Public Choice is important to Law and Economics because law and adjudication are political, as Green (2012) stresses in the introduction to L.A. Hart's book *The Concept of Law*. Preferences are endogenous, strongly shaped by laws, institutions, culture, and the political process and arena itself[36]. In addition, laws have certain limits (Ellickson 1991)[37]. The question of why we should obey the law is a very old topic of discussion in philosophy, and evidence indicates that compliance is not purely driven by an economics of crime approach. Law and governance are interconnected; disregarding governance makes such an analysis very incomplete. A careful exploration requires understanding of the incentives and motivations of all decision making. It is highly problematic, as Basu (2018) has demonstrated, to assume that government agents are robotic followers of the laws. Further, LoPucki and Weyrauch (2000) emphasize the manipulative nature of legal strategies:

> [S]tar litigators – or "dream teams' of them – can regularly win judgements in cases that have no merit, prevent meritorious cases from ever reaching trial, turn victims into wrongdoers, and make the system set the guilty free (p. 1409)[38].

As Basu (2018) stresses, governments often tend to state their laws in an ambiguous or contradictory way, promoting conflicting behavior or even making compliance impossible. Governments, at times for Machiavellian reasons, give such mixed signals, leaving the citizenry confused about the right course of action (pp. 57-58). As the law is a mix of fixed

[36] Nussbaum (1997) emphasizes that the endogeneity of preferences has been recognized by major figures in the history of Western philosophy such as Plato, Aristotle, the Epicureans, the Stoics, Thomas Aquinas, Spinoza, or Adam Smith.
[37] Dixit (2004): "'Law and Economics' and 'Lawlessness and Economics' can be regarded as two mutually exclusive and jointly exhaustive subfields of the larger field of economic governance" (p. 9).
[38] For evidence on manipulation of data linked to governance, see Chan et al. (2019).

rules and flexible standards, there is enough room for courts to exercise judgment and discretion (LoPucki and Weyrauch 2000). Moreover, more mapping is needed to understand when and how the legal system adapts to potential biases. Buchanan (1974) rightly expressed the opinion that "[l]aw is far too important to be left to the lawyers, especially since lawyers come increasingly to man the corridors of Leviathan" (p. 484). The political and legal systems are complex systems, requiring that fields collaborate with one another. A Public Choice approach can help in better evaluating the "action" in place beyond those insights that Law and Economics alone provide, allowing a better answer as to how law actually affects people; therefore, giving Law and Economics a higher "R^2". Understanding the instrument of law as vehicle of coordination, deterrence, incapacitation, opportunities, information, beliefs, or power requires consideration of the possibilities that a Public Choice perspective offers.

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